

# Muhammad Jawad Haleem

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## EDUCATION

**FAST National University of Computer and Emerging Sciences** *2020–2024*  
BS Electrical Engineering (Majors: Computer Engineering, Embedded Systems, Machine Learning)

**Government College University, Lahore** *2018–2020*  
Pre-Engineering: Physics, Chemistry, Math

**Allama Iqbal Public School, Kasur** *2016–2018*  
Matriculation: Physics, Chemistry, Math, Biology

## PROJECTS

### Submittal Extractor

Developed a Python-based submittal extraction pipeline that automatically identifies and parses submittal approval sections from unstructured PDF documents using PyPDF2, custom regular expressions, and document-chunking strategies—streamlining data ingestion and eliminating manual processing.

### RAG-Based Stock Bot

Developed a stock recommendation bot using LLM agents and Retrieval-Augmented Generation (RAG) for the cement industry. Analyzed news articles to identify impactful information, providing buy, sell, or hold advice for cement stocks.

### LangGraph Chatbot:

Developed a customized LangGraph-powered RAG chatbot with Google Calendar event demos and contextual blog QA.

### LaTeX to Python Conversion

Achieved the highest accuracy of 98.3% in converting LaTeX mathematical expressions to Python code by leveraging and fine-tuning the T5 model across all teams.

### Solar and Wind Energy Prediction

Trained a model to predict energy production for a specific day in the location where the training data was collected.

### Final Year Project

*Aug 2023–Jun 2024*

### Implementation of Supercomputer as a Service (MPICH, Raspbian, MongoDB, Node.js)

Developed a Supercomputer as a Service (SCaaS) platform using DevOps practices to enhance HPC cluster efficiency and manageability.

## WORK EXPERIENCE

### AI Engineer

*Nov 2024–Present*

Working on cutting-edge business solutions using LLMs, specializing in chatbot development with LangGraph. Gained hands-on experience in designing AI-driven applications and enhancing problem-solving skills through real-world projects.

## SKILLS AND TOOLS

**Professional Skills:** Problem Solving, Time Management, Team Coordination

**Technical Skills:** Python, NLP, RAG, LLM Agents, LangGraph, PyTorch, C/C++, STM32 IDE, AutoCAD, Cluster Computing, MATLAB, Microchip Studio, Vivado.

## ACHIEVEMENTS

- Secured **1st** place in the Advanced AI Bootcamp focusing on LLMs.
- Ranked among the top 500 students in the Huawei ICT competition.

## TRAINING / CERTIFICATION

- Attended 8-Week Advanced AI Bootcamp on LLMs at SEECS, NUST
- IEEE Project Exhibition – Participated and displayed a DLD project.
- Speed Wiring Competition – Our team secured 3rd place at NASCON.

*Aug 2024–Sep 2024*